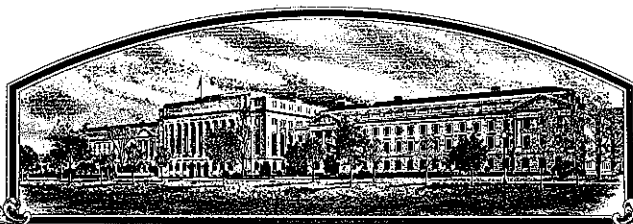


No.

9300171



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Pioneer Hi-Bred International, Inc.**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 Stat. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'2684'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 30th day of September in the year of our Lord one thousand nine hundred and ninety-three.

Attest:

*Kenneth Egan*

Commissioner

Plant Variety Protection Office  
Agricultural Marketing Service

*Mike Egan*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**  
(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Pioneer Hi-Bred International, Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. WBB281Q6	3. VARIETY NAME 2684 AAA 21 Sept 1993
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) Dept. of Wheat Breeding R.R. 1 Box 297A Windfall, IN 46076		5. PHONE (include area code) (317) 945-7906	<b>FOR OFFICIAL USE ONLY</b> <b>VPPO NUMBER</b> 9300171 <b>FILING</b> Date: Mar. 18, 1993 Time: 12:45 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M. <b>FEES</b> Filing and Examination Fee: \$2325.00 Date: Mar. 18, 1993 Certificate Fee: \$275.00 Date: Sept. 2, 1993
6. GENUS AND SPECIES NAME Triticum aestivum	7. FAMILY NAME (Botanical) gramineae		
8. CROP KIND NAME (Common Name) Wheat	9. DATE OF DETERMINATION August 1, 1989		
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation		11. IF INCORPORATED, GIVE STATE OF INCORPORATION Iowa	
12. DATE OF INCORPORATION May 1926		13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Dr. Gregory C. Marshall Pioneer Hi-Bred International, Inc. R.R. 1 Box 297A Windfall, IN 46076	

PHONE (include area code): (317) 945-7906

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

a. ☒ Exhibit A, Origin and Breeding History of the Variety.

b. ☒ Exhibit B, Novelty Statement.

c. ☒ Exhibit C, Objective Description of Variety.

d. ☒ Exhibit D, Additional Description of Variety.

e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.

f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 3/16/93

g. ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)  
☐ YES (If "YES," answer items 16 and 17 below) ☒ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?  
☐ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?  
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.  
☐ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act. Give date: \_\_\_\_\_)  
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?  
☐ YES (If "YES," give names of countries and dates)  
☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s)) Gregory C. Marshall	CAPACITY OR TITLE Coordinator of Soft Winter Wheat Breeding	DATE 3/16/93
SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE

14A. Exhibit A. Origin and Breeding History of Pioneer Wheat  
Cultivar WBB281Q6

2684 AAA 21 Sept 1993

Pioneer cultivar WBB281Q6, *Triticum aestivum* L., em Thell., a soft red winter wheat was developed by Pioneer Hi-Bred International, Inc.. Using a pedigree selection breeding method, WBB281Q6 was derived from the three parent cross: Pioneer line 'W9057B' / 'Caldwell' // 'Hunter'.

Pioneer line W9057C was derived from the cross: Pioneer line 'W605'/'IN 5517'. IN 5517 was an experimental line from Indiana. Pioneer line W605 was derived from the cross: 'IN4946-A4-18-2'/'MO W7510'; experimental lines from Indiana and Missouri, respectively. The single cross: W9057B/Caldwell (designated 'WBA800') was made in the 1981 spring greenhouse cycle at Windfall, IN. The final cross WBA800/Hunter was made in the 1981 fall greenhouse cycle and coded 'WBB281'. The subsequent breeding history of WBB281Q6 was as follows:

<u>Year</u>	<u>Generation</u>	
1981	Final Cross	Cross designated WBB281
1982	F1	Grown in spring transplant nursery at Windfall, IN.
1982-83	F2	Bulk populations grown at Windfall, IN. Individual head selections made.
1983-84	F3	Headrows of F2 selections grown at Huntsville, AL.
1984-85	F4	F3 selections grown in F4 headrows at St. Matthews, SC and Americus, GA.
1985-86	F5	F4 selections grown in F5 headrows at St. Matthews, SC and Americus, GA.
1986-87	F6	Early generation yield testing of F5 selections.
1987-88	F7	Individual head selections from yield plot grown in reselect headrows at St. Matthews, SC and Statesboro, GA.
1988-89	F8	Preliminary yield testing of F7 selections at St. Matthews, SC; one selection designated 'WBB281Q6'.
1989-90	F9	Advanced yield testing of WBB281Q6. 200 heads harvested.
1990-91	F10	Elite yield testing of WBB281Q6. 200 purification headrows grown, surrounded by .13 acre bulk increase at St. Matthews, SC. Breeder seed turned over to Pioneer Parent Seed Department for further increase.

## 14A. Exhibit A. (con't.)

1991-92 F11

Elite yield testing continued, designated as 'YW514'. Pioneer Parent Seed Department continued increase.

1992-93 F12

Elite yield testing continued, designated as 'XW514'. Pioneer Parent Seed Department continued increase.

Decision to release will be made in August 1993, at which time WBB281Q6 will be assigned a commercial code.

The cultivar WBB281Q6 was bred and selected at each generation for any or all of the following characteristics: disease resistance, plant type, plant height, head type, straw strength, maturity, grain yield, test weight, and milling and baking qualities.

WBB281Q6 has been observed to be uniform and stable since the eighth generation, or the last four generations. Variants that may persist may be awnless and/or slightly taller plants at a frequency of less than 1/30,000, and/or non-waxy plants at a frequency of less than 1/50,000.

## 14B. Novelty Statement

*2684' AAA 21 Sept 1993*

WBB281Q6 is most similar to Agripro variety Hunter, but with the following distinguishing characteristics:

- 1) WBB281Q6 is awned while Hunter is awnletted.
- 2) The coleoptile of WBB281Q6 is purple while the coleoptile of Hunter is white.
- 3) The glume beak of WBB281Q6 is acute while that of Hunter is obtuse.
- 4) The phenol reaction of WBB281Q6 is black while Hunter is brown.

U. S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, MEAT, GRAIN AND SEED DIVISION  
BELTSVILLE, MARYLAND 20785

EXHIBIT C  
(Wheat)

## OBJECTIVE DESCRIPTION OF VARIETY

WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Pioneer Hi-Bred International, Inc.

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

Dept. of Wheat Breeding  
R.R. 1 Box 297A  
Windfall, IN 46076

FOR OFFICIAL USE ONLY

PVPO NUMBER

9300171

VARIETY NAME OR TEMPORARY DESIGNATION

WBB28106 (temporary des.)

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g. 089 or 09 ) when number is either 99 or less or 9 or less.

## 1. KIND:

1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

## 2. TYPE:

2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 1 1 = SOFT 2 = HARD 3 = OTHER (Specify)

2 1 = WHITE 2 = RED 3 = OTHER (Specify)

## 3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

133 FIRST FLOWERING 138 LAST FLOWERING

## 4. MATURITY (50% Flowering):

09 NO. OF DAYS EARLIER THAN 7 1 = ARTHUR 2 = SCOUT 3 = CHRIS 7=2548  
 NO. OF DAYS LATER THAN  4 = LEMHI 5 = NUGAINES 6 = LEEDS

## 5. PLANT HEIGHT (From soil level to top of head):

089 CM. HIGH  
04 CM. TALLER THAN 7  
 CM. SHORTER THAN  1 = ARTHUR 2 = SCOUT 3 = CHRIS 7=2548  
4 = LEMHI 5 = NUGAINES 6 = LEEDS

## 6. PLANT COLOR AT BOOTING (See reverse):

3 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

## 7. ANTHR COLOR:

1 1 = YELLOW 2 = PURPLE

## 8. STEM:

2 Anthocyanin: 1 = ABSENT 2 = PRESENT 2 Waxy bloom: 1 = ABSENT 2 = PRESENT  
2 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT 1 Internodes: 1 = HOLLOW 2 = SOLID  
04 NO. OF NODES (Originating from node above ground) 17 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

## 9. AURICLES:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT 1 Hairiness: 1 = ABSENT 2 = PRESENT

## 10. LEAF:

2 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 2 Flag leaf: 1 = NOT TWISTED 2 = TWISTED  
1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT 2 Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT  
13 MM. LEAF WIDTH (First leaf below flag leaf) 24 CM. LEAF LENGTH (First leaf below flag leaf)

## 11. HEAD:

☐ 3 Density: 1 = LAX 2 = DENSE 3 = MID-DENSE

☐ 1

Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE  
4 = OTHER (Specify) \_\_\_\_\_

☐ 4 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

☐ 1 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED  
5 = BROWN 6 = BLACK 7 = OTHER (Specify): \_\_\_\_\_

☐ 0 ☐ 9 CM. LENGTH

☐ 1 ☐ 4 MM. WIDTH

## 12. GLUMES AT MATURITY:

☐ 2 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)  
3 = LONG (CA. 9 mm.)

☐ 3 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)  
3 = WIDE (CA. 4 mm.)

☐ 2 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED  
4 = SQUARE 5 = ELEVATED 6 = APICULATE

☐ 2 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

## 13. COLEOPTILE COLOR:

☐ 3 1 = WHITE 2 = RED 3 = PURPLE

## 14. SEEDLING ANTHOCYANIN:

☐ 2 1 = ABSENT 2 = PRESENT

## 15. JUVENILE PLANT GROWTH HABIT:

☐ 2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

## 16. SEED:

☐ 1 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

☐ 1 Check: 1 = ROUNDED 2 = ANGULAR

☐ 2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

☐ 1 Brush: 1 = NOT COLLARED 2 = COLLARED

☐ 5 Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN  
4 = BROWN 5 = BLACK

☐ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) \_\_\_\_\_

☐ 0 ☐ 6 MM. LENGTH

☐ 0 ☐ 4 MM. WIDTH

☐ 4 ☐ 0 GM. PER 1000 SEEDS

## 17. SEED CREASE:

☐ 1 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'  
2 = 80% OR LESS OF KERNEL 'CHRIS'  
3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

☐ 1 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'  
2 = 35% OR LESS OF KERNEL 'CHRIS'  
3 = 50% OR LESS OF KERNEL 'LEMHI'

## 18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 2 STEM RUST (Races) \_\_\_\_\_

☐ 2 LEAF RUST (Races) \_\_\_\_\_

☐ 0 STRIPE RUST (Races) \_\_\_\_\_

☐ 0 LOOSE SMUT

☐ 2 POWDERY MILDEW

☐ 0 BUNT

☐ OTHER (Specify) \_\_\_\_\_

## 19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 SAWFLY

☐ 0 APHID (Bydv.)

☐ 0 GREEN BUG

☐ 0 CEREAL LEAF BEETLE

☐ OTHER (Specify) \_\_\_\_\_

HESSIAN FLY  
RACES:

☐ 1 GP

☐ 0 A

☐ 0 B

☐ 0 C

☐ 0 D

☐ 1 E

☐ 0 F

☐ 0 G

## 20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Hunter	Seed size	Hunter
Leaf size	Hunter	Seed shape	Hunter
Leaf color	Hunter	Coleoptile elongation	2548
Leaf carriage	Hunter	Seedling pigmentation	2555

## INSTRUCTIONS

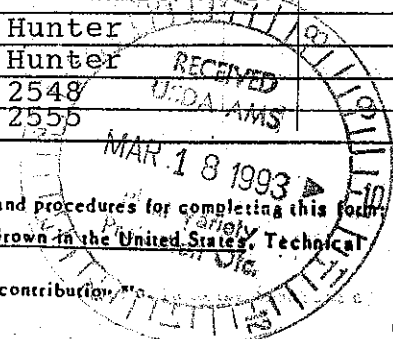
GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Driggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution to seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the seedling.

FORM LMBB 478-5 (5-62) (Revised)

9500171



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## 14D. Exhibit D. Additional Description of the Variety.

## 1) Yield and agronomic data.

'2684' AAA 21 Sept 1993  
WBB281Q6 has been wide-scale yield tested, using comparative research plots since the 1990 growing season. Testing has been conducted across the area of adaption, including locations in Virginia, North Carolina, South Carolina, Georgia, Kentucky, Missouri, Tennessee, and Arkansas (Table 1).

## 2) Information on reaction to major diseases.

Leaf rust - Moderate Resistance to prevalent races in southeastern region of the United States. Postulated to have gene Lr 18. Seedling tests conducted at Plant Disease Clinic at the University of Minnesota in cooperation with the USDA Cereal Rust Lab.

Stem rust - Resistant to prevalent races. Postulated to have genes Sr 17 and 36; also tested at Plant Disease Clinic.

Powdery Mildew - Resistant to prevalent races in southeastern region of the United States.

Soil Borne Mosaic and Wheat Spindle Streak Mosaic Viruses - Resistant.

Leaf Blights - Excellent tolerance to the complex of the most common organisms that cause leaf blights; including Septoria tritici blotch, Septoria nodorum blotch, and tan spot.

## 3) Information on reaction to major insects.

Hessian fly - In field screening experiments, WBB281Q6 has demonstrated resistance to the predominant biotypes of Hessian fly in the Southeastern U.S.

## 4) Information on milling and baking qualities.

WBB281Q6 has demonstrated very satisfactory milling quality and baking quality as compared to current predominant soft wheat varieties (Table 2).



Table 1. Varietal yield performance and agronomic characteristics as recorded in Pioneer Elite Yield Tests during the period 1991-1992.

Cultivar	Test		Heading		Leaf		Powd	Leaf	HF @
	Yield	weight	Height	date	Lodge	rust	mild	blt.	
	bu/ac	lbs/bu	cm	Jan. 1	1-9¶	1-9¶	1-9¶	1-9¶	1-9¶
Southeastern States:									
WBB281Q6	81.7	57.2	93.5	97.9	8.3	6.9	7.8	7.0	7.5
2548	67.4	52.1	94.5	104.4	8.8	6.9	5.0	7.0	1.0
2555	62.3	50.5	102.1	106.0	8.3	5.9	4.7	5.0	9.0
COK 9766	71.4	54.2	100.3	101.4	3.5	8.2	6.2	7.5	6.0
COK 983	70.6	55.8	88.4	100.0	8.3	6.3	7.1	4.5	1.0
lsd (0.05)	5.0	1.2	4.9	1.9	1.9	1.3	.6	1.1	-
# loc	22	20	3	4	2	6	6	1	1
# years	2	2	2	2	1	2	2	1	1

Upper Delta Region:

WBB281Q6	85.6	60.7	-	-	-	-	-	-	-
2548	65.7	57.8	-	-	-	-	-	-	-
2555	76.7	56.8	-	-	-	-	-	-	-
Cardinal	74.9	59.4	-	-	-	-	-	-	-
Clark	78.4	59.0	-	-	-	-	-	-	-
lsd (0.05)	11.4	2.3	-	-	-	-	-	-	-
# loc	3	4	-	-	-	-	-	-	-
# years	1	1	-	-	-	-	-	-	-

¶ scale 1 to 9, where 9 = excellent or resistant; 1 = poor or susceptible.

@ Data collected from headrows in Hession fly nursery at St. Matthews, SC

Southeastern State Locations: Charles City, VA; Suffolk, VA; Edenton, NC; Plymouth, NC; Greenville, NC; Rowland, NC; Monroe, NC; Darlington, SC; Manning, SC; St. Matthews, SC; Orangeburg, SC; Statesboro, GA; Dublin, GA; Americus, GA.

Upper Delta Region Locations: Russellville, KY; Sikeston, MO; Union City, TN; Forrest City, AR.

Table 2. Soft wheat quality data 1990-1992 from the Pioneer Quality Lab, Johnston, Iowa.

VARIETY	FLR YLD	BFL YLD	FLR PRO	FLR WR	CK	TOP GRN	TGR AB	MILLING SCORE	BAKING SCORE
<i>'2684' AAA 21 Sept 1993</i>									
<del>WBB26106</del>	71.1	34.4	9.3	53.5	19.2	4.2	6.7	6	8
# obs	9	9	9	9	6	6	6		
2548	68.3	36.2	8.4	57.7	18.5	4.2	7.0	5	4
# obs	8	8	8	8	5	5	5		
2555	69.5	40.8	8.6	56.1	19.3	4.4	7.2	8	8
# obs	9	9	9	9	6	6	6		
COK 9766	68.3	35.9	9.2	56.1	18.9	5.0	4.0	5	6
# obs	9	9	9	9	3	3	3		
COK 983	71.3	36.5	9.3	54.0	19.0	6.1	6.4	7	8
# obs	9	9	9	9	6	6	6		
FL 302	71.7	37.8	8.6	54.1	19.1	4.4	6.9	8	8
# obs	6	6	6	6	6	6	6		

Trait abbreviations used in the above table.

FLR YLD -- Flour yield (%)

BFL YLD -- Break flour yield (%)

FLR PRO -- Flour protein (%)

FLR WR -- Flour Alkaline Water Retention Capacity (%)

CK -- Cookie diameter (cm)

TOP GRN -- Top grain rating of cookie (1-9)  
(1= poor, 9= excellent)

TGR AB -- Top grain abnormalities of cookie (1-9)  
(1= narrow valleys, 9= wide valleys)

MILLING SCORE -- Rating which weights Flour yield 60% and  
Break flour yield 40% (1= poor, 9= excellent)

BAKING SCORE -- Rating which weights Cookie spread 60% and  
AWRC 40% (1= poor, 9= excellent)

## 14E. Exhibit E. Statement of the Basis of Applicant's Ownership

Pioneer Hi-Bred International, Inc., Plant Breeding Division, believes it is the sole, original, and first breeder of the ~~WB28106~~ cultivar of soft red winter wheat for which it solicits a certification of protection.

'2684'

AAA

21 Sept

1993